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January 29, 2018

Ex Parte

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: TerreStar Corporation Request for Temporary Waiver of Substantial Service Requirements, WT Docket No. 16-290

Dear Ms. Dortch:

Enclosed for filing please find a legal analysis of the Wireless Telecommunications Bureau's October 10, 2017 denial of TerreStar Corporation's request for a temporary waiver of substantial-service requirements. As the analysis demonstrates, the Bureau's denial was unlawful on multiple independent grounds.

This letter is being filed electronically in accordance with Section 1.1206(b)(2) of the Commission's rules. Please contact me if you have any questions.

Sincerely,

/s/ Eugene Scalia

Eugene Scalia

Enclosure

LEGAL ANALYSIS OF THE WIRELESS TELECOMMUNICATIONS BUREAU'S DENIAL OF TERRESTAR'S REQUEST FOR TEMPORARY WAIVER OR EXTENSION OF SUBSTANTIAL-SERVICE REQUIREMENTS

January 29, 2018

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INTRODUCTION

TerreStar Corporation ("TerreStar") understands and respects the need to enforce the Federal Communications Commission's ("FCC") substantial-service requirements. But this is not a case of a licensee that sat on its hands, irresponsibly refused to address cognizable interference issues, or deliberately warehoused spectrum. Rather, throughout the term of TerreStar's 1.4 GHz licenses, the company worked conscientiously to bring this spectrum to beneficial use. Ultimately, however, TerreStar was placed in an impossible position because of a problem inherent in the Commission's own rules: the company's fully compliant service was fundamentally incompatible with another fully compliant service in adjacent spectrum. Because one of the services had to yield, TerreStar stepped up to develop a mutually beneficial solution that would offer tremendous benefits for public health. The FCC's Wireless Telecommunications Bureau ("Bureau") has not offered and cannot offer any rational basis for denying TerreStar the regulatory relief it now needs to finish implementing this solution.

Shortly after TerreStar acquired its licenses, the company began laboring diligently to build out its spectrum, pursuing a plan to develop a smart grid ecosystem that would use the spectrum to help utilities deliver electricity more efficiently. TerreStar's best efforts to develop that service were foiled by a problem that no amount of diligence—much less due diligence—could have prevented: After TerreStar invested significant time and effort to develop and implement its initial smart grid plan, it learned that its service and the life-critical Wireless Medical Telemetry Service ("WMTS") devices using adjacent spectrum were fundamentally incompatible. This incompatibility was the result of the particular types of receivers used by WMTS devices, which are susceptible to "desense" from fundamental emissions (i.e., emissions that remain entirely within the emitter's licensed band) in the adjacent band. But the FCC's service rules governing TerreStar's spectrum do not restrict fundamental, within-band emissions; they cover only out-of-band emissions. And there are no FCC standards for receivers at all. The result is that WMTS devices would have experienced interference in connection with TerreStar's smart grid operations *even though both services fully complied with FCC rules*. Further, no one could have discovered the interference problems earlier because the type of WMTS receivers at issue were not deployed until 2011, well into TerreStar's license term. Moreover, the technical specifications for WMTS receivers and their deployment in any particular wireless system are not publicly available information. For these reasons, the FCC recently published a public notice seeking information on WMTS interference issues, reflecting the Commission's own need to learn about this particular type of interference.[1] TerreStar cannot now be blamed for designing a fully compliant system that would, unbeknownst to anybody, including the Commission itself, be subject to interference problems engendered years later by another fully compliant system. That outcome would be arbitrary and capricious.

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[1] *FCC Seeks Comment & Data on Actions to Accelerate Adoption & Accessibility of Broadband-Enabled Health Care Solutions & Advanced Technologies*, Public Notice, 32 FCC Rcd 3660, 3673–75 ¶¶ 11–16 (2017) (asking "what, if any issues or concerns exist for patients and other users of medical devices when such devices are used primarily in potentially uncontrolled, non-hospital settings … where non-health related wireless technologies that also emit radio frequencies … may proliferate?").

When TerreStar realized that the initial planned use for its licenses was fundamentally incompatible with already deployed WMTS devices, it took immediate steps to solve the problem. TerreStar worked closely with staff from the Bureau, as well as licensees of the adjacent WMTS spectrum, to pursue a different use—one that promises to deliver better medical care to millions of patients across America—even though TerreStar was legally entitled to proceed with its original smart grid plan. Recognizing that this change would delay TerreStar's build out, the company expressly and conscientiously informed the Bureau that it would need regulatory relief from the substantial-service deadline. For its part, the Bureau consistently encouraged TerreStar's plan to use its spectrum to expand WMTS and certainly never raised any objections to that plan or expressed concerns about the fact that the company would be unable to meet its substantial-service obligations within the originally allotted time. When TerreStar formally requested a temporary waiver or extension of the substantial-service requirements, however, the Bureau abruptly rejected TerreStar's request. That denial was both unjust and unlawful.

As explained below, TerreStar should have been granted an extension or waiver of its substantial-service obligations on multiple, specific, and independent grounds. In denying TerreStar's request, the Bureau's Order discounts the truly unique circumstances of this case, ignores the unfairness of applying the substantial-service requirements to TerreStar, neglects to consider the public interest, violates principles of fair notice, overlooks important arguments made by TerreStar, and arbitrarily subjects TerreStar to disparate treatment without explanation. These errors should be corrected so that TerreStar can get on with the crucial business of swiftly developing its spectrum to expand life-saving medical monitoring services in hospitals across the country, to the tremendous benefit of the public interest. No other entity is positioned to bring this spectrum to such productive use, so fast.

The petition for reconsideration and underlying request for relief from the substantial-service requirements should be granted.

BACKGROUND

TerreStar acquired its 1.4 GHz licenses in 2007 and 2008.[2] Shortly after it did so, it began developing a smart grid ecosystem that would help utilities deliver electricity more efficiently by monitoring the electric grid. It would do this by, for example, wirelessly connecting a utility's central systems to home meters and infrastructure monitors. In late 2013, TerreStar was on track to meet its obligation to provide "substantial service" within its ten-year license term, as required by 47 C.F.R. § 27.14(a).

TerreStar's plans were derailed by an obstacle that *no* amount of diligence or foresight could have avoided. While TerreStar was developing its smart grid ecosystem, immediately adjacent spectrum was being developed for use by WMTS devices. These devices, now

[2] TerreStar's petition for reconsideration provides additional details regarding the historical and technical background of TerreStar's request for a temporary waiver or extension of the FCC's substantial-service requirements. *See* Petition for Reconsideration of TerreStar Corproation, WT Docket No. 16-290, at 6–11 (filed Nov. 9, 2017) ("TerreStar Petition for Reconsideration").

deployed in thousands of hospitals across the country, enable life-critical wireless monitoring of medical patients. They are small enough to be worn by patients, giving patients more mobility, reducing healthcare costs, and saving lives. To provide these benefits, however, WMTS devices employ sensitive receivers with wide passband filters. As a result, they are highly susceptible to "desense" from fundamental emissions *within the adjacent band*.

The Commission did not certify the relevant transmitters commonly used by WMTS until 2011. WMTS devices were built and deployed during and after that date, and their product specifications were not discoverable before then. Even after 2011, the performance data for WMTS *receivers* did not enter the public domain, because the FCC does not certify these receivers. It was therefore impossible for TerreStar to predict the sensitivity of WMTS receivers to TerreStar's planned smart grid operations when TerreStar acquired its 1.4 GHz licenses in 2007 and 2008.

Indeed, it was impossible for the *Commission* to foresee the sensitivity of WMTS receivers when it first wrote the service rules for the 1.4 GHz band in 2002.[3] As noted above, the FCC's recent public notice requesting information on potential interference with WMTS devices demonstrates that the Commission itself needs to learn more about this issue.[4] Moreover, the Commission's Part 27 regulations simply do not protect WMTS devices from emissions *within* a licensee's band; rather, they address only *out-of-band* emissions.[5] In other words, it is possible for fully compliant uses of the 1.4 GHz band to unavoidably conflict with WMTS devices that incorporate wide passbands, even though those devices are also fully compliant with the Commission's rules governing their spectrum.

For years, TerreStar worked with Bureau staff and WMTS representatives to mitigate the interference issues. At the FCC's suggestion, TerreStar met with WMTS representatives in early 2014 and discovered—for the first time—that the unusually sensitive WMTS devices would have difficulty functioning in spectrum next to TerreStar's fully compliant smart grid service. Throughout 2014 and into 2015, TerreStar explored possible ways to modify its planned smart grid operations to accommodate WMTS. At multiple meetings with Bureau staff, TerreStar discussed those efforts and explained that it would need regulatory relief from its substantial-service obligations if its efforts were to succeed. The Bureau supported TerreStar's efforts and in conversations with TerreStar expressed its support for TerreStar's approach.

After discovering the interference issues, TerreStar could have decided—lawfully—to proceed with its smart grid plan, because it could have operated its smart grid ecosystem in

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[3] *See Amendments to Parts 1, 2, 27 and 90 of the Commission's Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands*, Report and Order, 17 FCC Rcd 9980 (2002) ("*1.4 GHz Service Rules Order*") (adopting 1.4 GHz service rules).

[4] *See supra* n.1.

[5] Because the Part 27 regulations address only out-of-band emissions, the "technical rules" to which the Bureau's Order repeatedly refers are irrelevant to the interference problems at issue here. *See TerreStar Corporation Request for Temporary Waiver of Substantial Service Requirements for 1.4 GHz Licenses*, Order, DA 17-995 (rel. Oct. 10, 2017) ("*Order*") at 5–6 ¶¶ 10–11, 7–8 ¶¶ 14–15.

compliance with the Commission's rules. But recognizing that one of the two adjacent operations would have to yield, as well as the significant benefits to public health from WMTS, TerreStar abandoned its plan to use its spectrum for smart grid operations in mid-2015. Instead, TerreStar worked with WMTS providers to develop a new plan to use its spectrum to expand WMTS. TerreStar met with Bureau staff to explain its new plan and to underscore its need for relief from its substantial-service obligations. The Bureau positively received the plan, which would resolve the interference issues posed by WMTS receivers and provide needed additional WMTS capacity. Relying on the Bureau's posture, TerreStar switched from its smart grid plan to WMTS.

From late 2015 to mid-2016, TerreStar continued to work with the Bureau and WMTS providers to develop its 1.4 GHz licenses in order to facilitate the expansion of WMTS. TerreStar's spectrum would be used to bring WMTS to more hospitals—including hospitals in rural areas—and more patients. This use would particularly benefit patients at federal hospitals, such as Veterans Health Administration medical centers and military hospitals, which require additional spectrum to comply with new federal cybersecurity mandates. Throughout the time TerreStar spent developing its WMTS plan, it held frequent meetings with Bureau staff, keeping them apprised of its progress and explaining its need for relief. Throughout, the Bureau was fully aware of TerreStar's approach—as well as TerreStar's likely need for a waiver—and continued to support it.

After making considerable progress with this new approach, TerreStar submitted its request for a temporary waiver or extension in July 2016. TerreStar explained that it was entitled to a waiver under two separate provisions of the FCC's waiver regulation, 47 C.F.R. § 1.925(b)(3)(i) and (ii), and that it was separately entitled to an extension pursuant to 47 C.F.R. § 1.946(e)(1).[6] In spite of TerreStar's good-faith efforts to address a problem resulting from the Commission's own regulatory framework, to protect Americans' lives, and to meet its substantial-service obligations, the Bureau issued an Order denying TerreStar's request for a variety of unlawful and inconsistent reasons.

ARGUMENT

The Bureau's Order must be reconsidered. Instead of applying the factors required by the FCC's own regulations, the Bureau's Order focuses on blaming TerreStar for needing regulatory relief, even though TerreStar was essentially compelled to abandon its lawful initial plan and instead pursued a socially beneficial solution to an unforeseeable problem. The Order ignores the fundamental inequity of denying the waiver, given that the Bureau was fully aware of TerreStar's change in plans and encouraged that shift. The Order makes no effort to consider or to justify the costs to the public interest of the decision to deny life-saving use of the 1.4 GHz spectrum. It entirely fails to address certain of TerreStar's arguments. And it is replete with

[6] TerreStar also explained that it was entitled to a waiver pursuant to the "good cause" provision of the FCC's regulations, 47 C.F.R. § 1.3. This provision generally requires substantially the same showing as 47 C.F.R. § 1.925(b)(3), and this memorandum will therefore not address it separately. *See* TerreStar Corporation Request for Temporary Waiver of Substantial Service Requirements, FCC ULS File Nos. 0007375830-0007375893 at 13 n.27 (filed Aug. 12, 2016) ("TerreStar Waiver Request"); *Order* at 8 ¶ 16.

factual errors. It is difficult to see what would be gained from denying relief to TerreStar, when its proposal offers such vast and broadly supported public-interest benefits that can be realized within the next three years without causing any harm or diminution of commitment to providing substantial service.

Specifically, TerreStar should be granted a temporary waiver or extension of the substantial-service requirements for at least four independently sufficient reasons:

> (1) TerreStar should be granted an extension because the interference issues posed by sensitive WMTS devices are circumstances that were entirely outside of TerreStar's control. No amount of diligence could have uncovered the interference problem. *See* 47 C.F.R. § 1.946(e)(1).
>
> (2) TerreStar should be granted a waiver because applying the substantial-service requirements in this circumstance would be inequitable *and* contrary to the public interest due to the several "unique" and "unusual" circumstances presented by this case: the conflict between fully compliant uses of adjacent spectrum; the specific public-interest benefits of the proposed solution of expanding WMTS, as demonstrated by the broad and unanimous support for TerreStar's petition for reconsideration; and the likelihood that TerreStar would rapidly implement this solution. *See* 47 C.F.R. § 1.925(b)(3)(ii).
>
> (3) If TerreStar's waiver request is granted, TerreStar will rapidly put its portion of the 1.4 GHz spectrum to use supporting life-saving WMTS. If not, the spectrum will likely be unused for many years. Denial of TerreStar's request therefore would frustrate the very purposes of the substantial-service rules—to prevent licensees from stockpiling spectrum, to ensure spectrum is effectively used, and to promote technological development—and granting the requested waiver would affirmatively serve the public interest. *See* 47 C.F.R. § 1.925(b)(3)(i).
>
> (4) The Bureau must grant TerreStar a waiver because denying the waiver request unlawfully subjects it to disparate treatment without explanation. The Bureau recently has granted waivers to licensees with similar or even less meritorious requests, and its Order denying TerreStar's waiver request fails to explain why it is treating TerreStar differently.

For these reasons, the Bureau should reconsider its Order denying TerreStar's request for relief.

I. TERRESTAR SHOULD BE GRANTED AN EXTENSION UNDER 47 C.F.R. § 1.946(e)(1) BECAUSE CIRCUMSTANCES OUTSIDE OF ITS CONTROL PREVENTED IT FROM MEETING ITS SUBSTANTIAL-SERVICE OBLIGATIONS.

The Commission's regulations allow it to extend a licensee's deadline for meeting substantial-service requirements "if the licensee shows that failure to meet the construction or coverage deadline is due to … causes beyond its control." 47 C.F.R. § 1.946(e)(1). TerreStar is entitled to an extension under this provision because no amount of diligence—much less reasonable or due diligence—would have enabled it to avoid the obstacles that kept it from providing timely substantial service.

By 2014, TerreStar had made significant progress in developing its spectrum for a smart grid ecosystem. Had it continued implementing its smart grid plan, it would in all likelihood have completed its substantial-service obligations on time. TerreStar's inability to meet the deadline was caused by a factor entirely outside of TerreStar's control: the sensitivity of WMTS receivers to fundamental emissions from *fully compliant* smart grid operations.

The interference issues identified by TerreStar in 2014 were impossible for even the Commission to predict and were therefore well beyond TerreStar's control. TerreStar's fully compliant smart grid network and life-saving WMTS devices would have been mutually incompatible because of the unusual sensitivity of WMTS receivers to fully compliant devices operating in adjacent spectrum. But the relevant WMTS devices did not exist when TerreStar acquired its licenses and began to develop its spectrum for smart grid operations. And even after WMTS *transmitters* were certified by the FCC in 2011, the sensitivity of WMTS *receivers* was not public information; the FCC did not examine the receivers when it certified the WMTS devices, and WMTS manufacturers were under no obligation to disclose their specifications. Before WMTS devices were built and widely deployed, therefore, it was simply not possible for TerreStar to discover that its planned smart grid implementation would eventually conflict with an unusually sensitive, medically critical adjacent use. No additional investigation or planning would have identified the problem. It would have taken a fortune teller, not an engineer, to predict the interference problems that the later-deployed WMTS receivers would pose for TerreStar's plans.

Contrary to the Bureau's finding, TerreStar thus *fulfilled* its obligation "to investigate all factors that might have [had] a bearing on the licenses it sought, and to determine the viability of any planned service officering prior to acquiring those licenses."[7] The company cannot be faulted for designing a system in *full compliance* with FCC rules, and then failing to anticipate a problem in a system that was *also fully compliant* with FCC rules—a problem caused by a receiver that the FCC does not certify, the specifications of which are not publicly discoverable, and that was not even deployed until 2011, several years into TerreStar's license term. Rather, it was TerreStar that stepped forward *and solved* a dilemma resulting from the FCC's own regulatory framework.

The Order erroneously concludes that this interference problem was within TerreStar's power to predict because "TerreStar was on notice of the possible effects of adjacent band incumbency on 1.4 GHz operations, as well as the technical requirements with which it would be required to comply in order to accommodate the operations of incumbent licensees in those adjacent bands."[8] This observation overlooks the central problem: WMTS would be incompatible with smart grid operations even if both systems complied with *all* of the FCC's technical requirements. That is because the interference concerns identified by the FCC in the 2002 Part 27 service rules relate to *out-of-band* emissions, *see* 47 C.F.R. § 27.53(a), while the WMTS interference issues identified by TerreStar in 2014 relate to fundamental, *within-band* emissions. Because the interference at issue was associated with fundamental emissions from

[7] *Order* at 9 ¶ 17.

[8] *Id*.

fully Part-27 compliant smart grid devices, TerreStar could not have modified its smart grid implementation plans to avoid the interference problem. Moreover, TerreStar could not have learned of this problem from the FCC's rules. These rules did not provide—and, given the non-public nature of the particular WMTS sensitivity problems at issue here, could not have provided—any advance notice of this interference.

The Order also observes that "voluntary business decisions are not circumstances beyond the licensee's control," suggesting that regardless of what *led* to TerreStar's decision it must bear the cost of abandoning its smart grid plan.[9] But it mischaracterizes events to describe TerreStar's response to the dilemma that was thrust upon it and WMTS providers by the Commission's regulatory framework as "voluntary"; one of the two was compelled to yield, and that TerreStar was the one to do so hardly makes it "voluntary." It was *impossible* for TerreStar to commence it smart grid operations—and thereby meet its substantial-service deadline—and not run into serious interference problems caused by WMTS receivers. It would defy reason for the Bureau to conclude that the FCC's substantial-service requirements obligated TerreStar to press on with its smart grid plan and put millions of lives at risk.[10] Although both were fully compliant with FCC rules, either smart grid operations or WMTS had to yield. TerreStar remedied the problem—which ultimately arose from the Commission's *own* regulatory regime—by giving up more convenient or lucrative uses of its spectrum in favor of supporting WMTS.

In short, TerreStar found itself between a rock and a hard place, not because of any bad business judgment that it made, but because the Commission's own rules allowed for fundamentally incompatible uses of adjacent bands. The Company should not now be punished for being the party that stepped up to remedy this problem by changing its business plan in the service of public health.

For these reasons, the Bureau should reconsider its Order denying TerreStar an extension under 47 C.F.R. § 1.946(e)(1).

II. TERRESTAR SHOULD BE GRANTED A WAIVER OF THE SUBSTANTIAL-SERVICE REQUIREMENTS UNDER 47 C.F.R. § 1.925(b)(3)(ii).

TerreStar also satisfies the requirements for a waiver under 47 C.F.R. § 1.925(b)(3)(ii). As relevant here, subparagraph (ii) authorizes the Commission to grant a waiver request: if the request presents "unique or unusual factual circumstances"; and if, in light of those circumstances, it "would be inequitable … *or* contrary to the public interest" to enforce the substantial-service requirement. § 1.925(b)(3)(ii) (emphasis added). The Bureau misapplied the legal standard under this provision, and, in any event, TerreStar meets both requirements of this standard.

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[9] *Order* at 9 ¶ 17.

[10] *See* Petition for Reconsideration of the American Society for Healthcare Engineering, WT Docket No. 16-290, at 7 (filed Nov. 9, 2017) ("The total number of deployments in the 1.4 GHz band has increased about 20 percent per year since 2013 with a total of 321,259 transmitters/access points at 2,025 hospitals, as of September 30, 2017.").

A. The Bureau Applied The Wrong Legal Standard Under The Waiver Provision.

As an initial matter, the Bureau's Order applied an incorrect legal standard in concluding that TerreStar "has failed to demonstrate" that the conditions necessary for a waiver are present here.[11] The heart of the Bureau's explanation for rejecting TerreStar's request under subparagraph (ii) is its conclusion "that TerreStar's failure to develop and deploy a non-interfering solution in a timely manner resulted in the need to request the instant relief."[12] This statement reflects a fundamental misinterpretation of the Commission's rules.

Nothing about subparagraph (ii) suggests that the availability of a waiver turns on whether the requester is ultimately responsible for the circumstances in which it finds itself. Subparagraph (ii) requires only that the circumstances be "*unique or unusual*." Unlike § 1.946(e)(1)'s standard for extensions, *see supra* Part I, subparagraph (ii) does not require that they be *outside the licensee's control*. Circumstances can be "unique or unusual" even if the requester bears some responsibility for them. And even if the requester's responsibility for its circumstances is *relevant* under subparagraph (ii), it is plainly not *dispositive*.

By focusing exclusively on the wrong legal question—whether TerreStar is responsible for its failure to meet the substantial-service requirements—the Bureau failed to grapple with the legal standard set out by the Commission's rules. The Bureau's Order does not separately analyze the discrete conditions set out in subparagraph (ii) as required. That is, it does not explain how its findings relate to whether TerreStar's case presents unique circumstances, or whether it would be inequitable or contrary to the public interest to enforce the substantial-service requirements in view of those circumstances.

For these reasons alone, the Bureau's Order is unlawful. The FCC must follow its own rules, *see*, *e.g.*, *Battle v. FAA*, 393 F.3d 1330, 1336 (D.C. Cir. 2005), and it is required to explain how its findings relate to each of the conditions set out in its regulations, *see Verizon Tel. Cos. v. FCC*, 570 F.3d 294, 304–05 (D.C. Cir. 2009) (vacating FCC denial of forbearance request because the agency considered only one factor and "failed ... to explain the path that it" took (citation omitted; ellipsis in original)). The Bureau failed to explain why TerreStar was not entitled to a waiver under subparagraph (ii). Nor could it have done so, because TerreStar satisfies the requirements enumerated in 47 C.F.R. § 1.925(b)(3)(ii).

B. Denying TerreStar's Waiver Request Is Inequitable.

Under FCC rules, the "inequitable" application of the substantial-service requirements is grounds for a waiver. 47 C.F.R. § 1.925(b)(3)(ii). The Commission's own rules thus demand that it make waiver decisions in light of equitable principles and treat waiver applicants fairly. *See generally* Black's Law Dictionary 895 (10th ed. 2014) (defining "inequitable" as "[n]ot fair" or "opposed to principles of equity"); *cf. Brandt v. Hickel*, 427 F.2d 53, 57 (9th Cir. 1970) ("To

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[11] *Order* at 8 ¶ 15.

[12] *Id*.

say to these appellants, 'The joke is on you. You shouldn't have trusted us,' is hardly worthy of our great government."). Moreover, the Bureau, no less than the Commission, is bound by general constitutional and administrative law principles of fair notice. *See Christopher v. SmithKline Beecham Corp.*, 567 U.S. 142, 156 (2012) ("[A]gencies should provide regulated parties fair warning of the conduct [a regulation] prohibits or requires." (citation omitted; second alteration in original)); *Satellite Broad. Co. v. FCC*, 824 F.2d 1, 3 (D.C. Cir. 1987) ("Traditional concepts of due process incorporated into administrative law preclude an agency from penalizing a private party for violating a rule without first providing adequate notice of the substance of the rule."). Those principles entitle TerreStar to fair notice of what is required to justify waivers under the FCC's rules. That is, TerreStar "acting in good faith [should] be able to identify, with ascertainable certainty, the standards" it must meet. *Gen. Elec. Co. v. EPA*, 53 F.3d 1324, 1329 (D.C. Cir. 1995) (citation omitted); *see also id.* at 1332 (representations by agency staff are relevant to whether a regulated entity has received fair notice); *Rollins Envtl. Servs. (NJ) Inc. v. EPA*, 937 F.2d 649, 653 (D.C. Cir. 1991) (same).

It is manifestly unfair to deny TerreStar's waiver in light of the company's resolution of the dilemma that it and WMTS providers faced and in light of the Bureau's encouragement of TerreStar's decision to shift from its smart grid plan to WMTS. At that point, with three years remaining in its license period, TerreStar likely would have readily met its substantial-service obligations if it had plowed ahead with its smart grid operations. The company decided not to do so, not because of any legal barrier but because it recognized that either smart grid operations or WMTS had to yield. Both before and after TerreStar decided to shift its plans, it met repeatedly with Bureau staff to discuss the situation. Throughout these meetings, the Bureau was informed of TerreStar's approach and TerreStar's likely need for a waiver. The Bureau never expressed any objections to TerreStar's WMTS plan or voiced any concerns that TerreStar would be unable to meet its substantial-service obligations. To the contrary, in light of the obvious public-health benefits of expanding WMTS, the Bureau consistently supported TerreStar's WMTS approach.[13]

TerreStar requires an additional three years to meet its substantial-service requirements because it has spent the last three years cooperating with the Bureau to identify and prevent destructive interference problems posed by sensitive WMTS receivers. It would be inequitable and would constitute a denial of fair notice to respond to TerreStar's efforts to remedy a flaw in the Commission's regulations by refusing to grant the company's waiver request, which was undertaken with the full knowledge and encouragement of FCC officials. But the Bureau's Order does not even address whether it would be fair and equitable to apply the substantial-service requirement to TerreStar. That failure alone renders it unlawful. *See Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("Normally, an agency

[13] The Public Notice recently issued by the Bureau could not have provided TerreStar fair notice that its request for an extension or waiver would be denied. *See Wireless Telecommunications Bureau Reminds Wireless Licensees of Construction Obligations*, Public Notice, DA 17-573 (rel. June 12, 2017). The Public Notice was issued almost a year *after* TerreStar filed its request. In any event, TerreStar did not make, and is not relying on, any "miscalculations or erroneous predictions about such factors as costs, demand, developments in the market, or timing and success in obtaining permissions that may be necessary for construction." *Id*. at 2. Rather, as explained herein, TerreStar encountered the highly unusual circumstance of, among other things, the incompatibility of two fully compliant systems. Thus, the Public Notice is perfectly consistent with the grant of a waiver or extension in this case.

rule would be arbitrary and capricious if the agency has … entirely failed to consider an important aspect of the problem").

C. Denying TerreStar's Waiver Request Is Contrary To The Public Interest.

i. Allowing TerreStar To Use Its Spectrum To Expand WMTS Advances The Public Interest.

Subparagraph (ii) also includes a separate ground for granting a waiver: A waiver may be granted when unique or unusual circumstances make applying the substantial-service rules "contrary to the public interest." 47 C.F.R. § 1.925(b)(3)(ii). As TerreStar and all of the other commenters have explained, granting the waiver would allow TerreStar to use its spectrum to expand life-saving WMTS technology. That would in turn protect WMTS from interference problems, allow WMTS providers to comply with federal encryption requirements, facilitate the expansion of WMTS to more patients at more hospitals, and enable medical telemetry services to be used in rural environments that currently cannot be reached under Part 95 rules. This development of WMTS is plainly in the public interest, as demonstrated by the broad and unanimous support for TerreStar's petition. Indeed, the FCC has itself concluded that WMTS "enhance[s] the ability of health care providers to offer high quality and cost-effective care to patients with acute and chronic health care needs."[14] And all of these beneficial developments are likely to occur rapidly, given the progress that TerreStar has already made.

Denying the waiver, on the other hand, is harmful to the public interest. Terminating TerreStar's licenses will leave TerreStar's portion of 1.4 GHz spectrum unused for many years at least while the Commission revisits the service rules for the spectrum to address the receiver sensitivity issue and re-auctions the spectrum, and then while the new licensee develops and builds out an appropriate service from scratch. At the end of all that time, it is likely that the new licensee will come to the same conclusion TerreStar has—the best (and perhaps only) use for this band is WMTS. Nothing will have been gained. Instead, years of vital patient care will have been lost; the spectrum will have lain fallow for longer than necessary; and the public interest will ultimately have suffered.

ii. The Order's Consideration Of The Public Interest Is Legally Deficient And Factually Erroneous.

The Order does not seriously contest the public-interest benefits of granting the waiver. To the extent that it considers the public interest at all, its discussion is legally deficient and factually erroneous. At least four flaws, individually or combined, require the Bureau to reconsider its Order denying TerreStar's waiver request.

First, in spite of the explicit incorporation of the public interest factor in 47 C.F.R. § 1.925(b)(3)(ii)—as well as in § 1.925(b)(3)(i)—the Order fails to consider the beneficial

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[14] *Amendment of Parts 2 & 95 of the Commission's Rules to Create A Wireless Medical Telemetry Service*, Report and Order, 15 FCC Rcd 11206, 11206 ¶ 1 (2000); *see also* Comments of Philips Healthcare, WT Docket No. 16-290, at 1–2 (filed Oct. 4, 2016).

consequences of granting TerreStar's waiver request. Instead, the Order merely recounts the history of TerreStar's efforts to develop its spectrum and then concludes "that TerreStar has failed to demonstrate that there were unique or unusual circumstances that made application of [the substantial-service rules] inequitable, unduly burdensome or contrary to the public interest."[15] The Order does not explain why this history is relevant to the public interest or otherwise demonstrate why the public interest would not be served by granting the waiver. This disregard of a consideration required by the agency's regulations twice over renders the Order unlawful. *See State Farm*, 463 U.S. at 43.

Second, to the extent the Order's discussion of TerreStar's history could be considered an assessment of the public interest, it would nevertheless constitute a legally *inadequate* analysis. That is because the Order focuses retrospectively on TerreStar's conduct over the past decade. To determine whether an agency action would or would not serve the public interest, however, the agency necessarily must consider the likely future consequences of its action. It cannot focus solely on the history leading up to its decision, because history is not determinative of the public interest going forward. Here, the Bureau failed to consider *any* of the likely consequences of granting or denying TerreStar's waiver request. Accordingly, its Order cannot stand.

Third, beyond the Order's general failure to consider the consequences of the Bureau's decision, it failed specifically to evaluate the costs and benefits of denying TerreStar's waiver request. This evaluation is required under *Michigan v. EPA*, where the Supreme Court held that "the phrase 'appropriate and necessary' requires at least some attention to cost": "[R]easonable regulation ordinarily requires paying attention to the advantages *and* the disadvantages of agency decisions." 135 S. Ct. 2699, 2707 (2015). Similarly, it is hard to imagine how any agency action for which the costs outweighed the benefits could serve the "public interest." If the Order had appropriately weighed the costs and benefits of granting or denying TerreStar's waiver request, it would have concluded that granting the request is in the public interest. The consequences of granting the request—rapid deployment of life-saving medical technologies—clearly outweigh the probable consequences of not doing so: an eventual re-auction of the spectrum several years from now, full utilization of the spectrum, if at all, many years beyond that, and at last the very same use that TerreStar proposes now.

Finally, the Order's erroneous assertion that "TerreStar has not demonstrated that there currently exists a shortage of WMTS spectrum capacity" cannot support a determination that granting the waiver would fail to serve the public interest.[16] This assertion, offered in the context of the Order's brief discussion of the "good cause" standard, *see* 47 C.F.R. § 1.3, is entirely unsupported. The Order does not attempt to refute the multiple explanations in the record regarding the need for additional WMTS spectrum: TerreStar, as well as multiple other

[15] *Order* at 8 ¶ 15.

[16] *Id.* at 8 ¶ 16.

parties, has demonstrated the costs of the current shortage of WMTS spectrum and has explained why opening up more spectrum for WMTS would be in the public interest.[17]

Rather than confronting these unrebutted facts, the Bureau declined "to address the question of whether, as a general matter, WMTS operators require access to additional spectrum" by pointing to another ongoing proceeding related to this issue.[18] But the Bureau cannot use the existence of one proceeding to avoid addressing questions squarely presented in another proceeding. *See Prometheus Radio Project v. FCC*, 824 F.3d 33, 45, 49 (3d Cir. 2016) (rejecting the FCC's attempt to "punt[]" its responsibilities by refusing to answer a crucial question and instead leaving the determination to a separate proceeding). It had a duty to consider the issue but unlawfully failed to do so.

D. TerreStar's Waiver Request Presents Unique Or Unusual Factual Circumstances.

Because it would be inequitable and contrary to the public interest to apply the substantial-service requirements here, TerreStar is entitled to a waiver so long as it demonstrates "unique or unusual factual circumstances." 47 C.F.R. § 1.925(b)(3)(ii). For many of the reasons discussed above, this case does present *truly* unique or unusual circumstances: (1) The delay in TerreStar's build-out was caused by an unusual interference problem that existed in spite of compliance with all FCC rules; (2) TerreStar has identified an exceptionally beneficial solution to this problem; and (3) the solution gives TerreStar an unusually high likelihood of rapidly satisfying the substantial-service requirements. Any one of these factors would make this case unusual. Combined, they render TerreStar's circumstances utterly unique and distinguish its request from other, run-of-the-mill requests for a waiver.

First, the interference between the smart grid operations and WMTS was unusual because it arose from an inherent flaw in the FCC's regulatory regime. That is, it would have occurred even if both services complied fully with the FCC's regulations. And this interference was all the more unusual in that it affected the delivery of life-critical health services. The Bureau's Order attempts to avoid this conclusion by asserting that TerreStar failed to demonstrate that its smart grid ecosystem cannot "be implemented without causing interference to adjacent spectrum users."[19] This assertion, however, is belied by the detailed and unrebutted evidence TerreStar and other WMTS stakeholders have provided showing the sensitivity of WMTS devices to fundamental emissions in the adjacent band.[20] And because this interference

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[17] *See* TerreStar Petition for Reconsideration at 16–18; Comments of GE Healthcare, GN Docket No. 16-46, at 3–4 (filed May 24, 2017) ("GE Comments"); Reply Comments of Philips Healthcare, WT Docket No. 16-290, at 2 (filed Oct. 14, 2016); Comments of the American Society for Healthcare Engineering, GN Docket No. 16-46, at 11 (filed May 24, 2017) ("ASHE Comments").

[18] *Order* at 8 ¶ 16 n.54.

[19] *Id.* at 4 ¶ 8.

[20] *See*, *e.g.*, Letter from Regina M. Keeney, Counsel to TerreStar Corporation, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 16-290, at 4–5, Attach. at 6–7 (filed June 14, 2017) ("June 2017 TerreStar Ex Parte"); Letter from Matt Pekarske and Neal Seidl, GE Healthcare, to Ajit Pai, Chairman, FCC, WT Docket No. 16-290, at 1–2 (filed Aug. 4, 2017) ("GE Letter"); Letter from Delroy Smith, Principal Scientist, R&D Project Leader,

exists even when smart grid services and WMTS are provided in full compliance with the FCC's rules, the Bureau's observation that TerreStar was "on notice of the power and field strength restrictions and coordination requirements in [the FCC's] rules" is irrelevant.[21] Although the FCC's rules limit "the power of any emission *outside a licensee's frequency band(s)*," they simply do not limit the power of fundamental, *within-band* emissions. 47 C.F.R. § 27.53(a) (emphasis added). TerreStar was therefore not on notice, whether by the FCC's rules or any other mechanism, of the unique sensitivity of WMTS to lawful, fundamental emissions in TerreStar's band.

Second, TerreStar developed an exceptionally beneficial solution to the interference problem after being put in an impossible situation by the FCC's rules. Although the sensitivity of WMTS receivers has significantly reduced the potential uses of TerreStar's spectrum, TerreStar has identified a socially positive, non-interfering use: to *expand* vital WMTS and to protect it from interference.[22] As TerreStar has repeatedly explained, because its spectrum is adjacent to spectrum currently used for WMTS, its spectrum can effectively be used to advance the availability and capability of WMTS.[23] Neither the Bureau nor any other party has identified any other viable, non-interfering use, which explains why, unlike most other waiver requests, TerreStar's waiver request not only went unopposed but also, as the Order recognizes, was *unanimously endorsed* by all relevant stakeholders.[24]

Third, TerreStar is unusually well positioned, compared to other waiver recipients, to quickly meet new substantial-service obligations if a waiver is granted. *See* GAO, *Spectrum Management: FCC's Use and Enforcement of Buildout Requirements*, GAO-14-236 (Feb. 2014) at 22 (finding that 77% of surveyed 220 MHz licenses with granted extension requests failed to meet the buildout requirements). TerreStar has provided the Bureau with a detailed implementation plan and has already developed a lease and registration system for spectrum access. And TerreStar has agreed to significant deployment milestones if the Bureau were to grant the waiver to ensure that this spectrum is rapidly put to use.[25] There are therefore good reasons to believe that granting TerreStar a waiver will ensure swift implementation of this vital, non-interfering use of spectrum.

Philips Healthcare, to Ajit Pai, Chairman, FCC, WT Docket No. 16-290, at 1 (filed Aug. 22, 2017) ("Philips Letter"); ASHE Comments at 11–13; GE Comments at 1–2.

[21] *Order* at 8 ¶ 15.

[22] *See* GE Letter at 1–2; August 2017 Philips Letter at 1–2; ASHE Comments at 11–13; GE Comments at 1–2.

[23] *See* TerreStar Waiver Request at 14–19; Supplemental Comments of TerreStar, WT Docket No. 16-290, at 9–11 (filed June 7, 2017).

[24] *Order* at 3 ¶ 5.

[25] *See* June 2017 TerreStar Ex Parte at 8–9.

III. TERRESTAR SHOULD BE GRANTED A WAIVER OF THE SUBSTANTIAL-SERVICE REQUIREMENTS UNDER 47 C.F.R. § 1.925(b)(3)(i).

Alternatively, TerreStar should be granted a waiver of the substantial-service requirements because the "underlying purpose[s]" of those requirements—which are to prevent licensees from stockpiling spectrum, to ensure spectrum is effectively used, and to promote technological development—"would not be served [and] would be frustrated" by applying them to TerreStar, 47 C.F.R. § 1.925(b)(3)(i), and granting TerreStar a waiver would manifestly be "in the public interest," *id.* The Bureau failed to address TerreStar's argument under subparagraph (i).[26] Had it done so, it could not rationally have concluded that TerreStar should be denied a waiver.

A. The Bureau Failed To Address TerreStar's Argument That It Is Entitled To A Waiver Pursuant To 47 C.F.R. § 1.925(b)(3)(i).

Subparagraphs (i) and (ii) of 47 C.F.R. § 1.925(b)(3) regarding the "underlying purpose" of the rules and "unique or unusual circumstances," respectively, provide separate and independently sufficient grounds for granting a waiver. The Bureau was therefore obligated to address TerreStar's waiver eligibility under each of these provisions. Because it failed entirely to address subparagraph (i), the Bureau's Order is unlawful.

The plain text of these subparagraphs demonstrates that they set forth independent grounds for a waiver. Subparagraph (ii) requires TerreStar to show—as it has—that its case presents "unique or unusual factual circumstances" and that in view of those circumstances application of the substantial-service rules would be "inequitable" or "contrary to the public interest." 47 C.F.R. § 1.925(b)(3)(ii); *see supra* Part II. Subparagraph (i), on the other hand, provides that a waiver is justified if "[t]he underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest." § 1.925(b)(3)(i). These two subparagraphs are linked by the disjunctive "or." Consequently, each provides an independently sufficient basis for waiving the substantial-service requirements. *See Horne v. Flores*, 557 U.S. 433, 454 (2009) ("Use of the disjunctive 'or' makes it clear that each of the provision's three grounds for relief is independently sufficient.").

Although the requirements of subparagraph (i) overlap somewhat with those of subparagraph (ii), they are meaningfully distinct and require a separate analysis. Most important here, subparagraph (i) does not require the existence of "unique or unusual factual circumstances." It follows that even if TerreStar has somehow failed to show that the circumstances it faces are unusual, TerreStar should nevertheless be granted a waiver under subparagraph (i) because denial would undermine the purposes of the substantial-service rules and a grant would serve the public interest.

The Bureau's failure to respond to TerreStar's argument under subparagraph (i) would by itself be sufficient reason to vacate the Order. *See*, *e.g.*, *Nat. Res. Def. Council, Inc. v. EPA*, 822

[26] *See* Reply Comments of TerreStar, WT Docket No. 16-290, at 6 n.11 (filed Oct. 14, 2016).

F.2d 104, 111 (D.C. Cir. 1987) ("[A]n agency rule is arbitrary and capricious if the agency … ignores important arguments or evidence."); *Int'l Fabricare Inst. v. EPA*, 972 F.2d 384, 389 (D.C. Cir. 1992) ("The EPA is required to give reasoned responses to all significant comments in a rulemaking proceeding." (citation omitted)). The Bureau should therefore reconsider its Order, address TerreStar's argument, and conclude—correctly—that TerreStar is entitled to a waiver.

B. Denying TerreStar's Waiver Request Frustrates The Underlying Purposes Of The Substantial-Service Requirements.

The point of the FCC's substantial-service requirements, as their statutory and regulatory background confirms, is ensuring spectrum is used rather than stockpiled and promoting the development of new technology. The Commission's authority to impose the substantial-service requirements stems from 47 U.S.C. § 309(j)(4)(B), which compels the FCC to promulgate regulations for spectrum auctions that "include performance requirements … to ensure prompt delivery of service to rural areas, to *prevent stockpiling* or warehousing of spectrum by licensees or permittees, and *to promote investment in and rapid deployment of new technologies and services*." *Id.* (emphasis added). In addition to the purposes set out in this provision, § 309(j)(3) lists the objectives the FCC's spectrum-auction regulations should serve, which include "*efficient and intensive use of the electromagnetic spectrum.*" § 309(j)(3)(D) (emphasis added). More broadly, the FCC has a statutory obligation to "encourage the deployment … of advanced telecommunications capability." § 1302(a). And in the Order applying the Part 27 requirements to the 1.4 GHz spectrum, the FCC explained that these requirements would "further[] the public interest and … *ensur[e] efficient use of the spectrum*, and *expeditious service* to the public."[27]

TerreStar's waiver request thus satisfies the first condition of subparagraph (i), that the "underlying purpose[s] of the rule(s) would not be served or would be frustrated by application to the instant case." 47 C.F.R. § 1.925(b)(3)(i). Granting TerreStar's waiver request would "promote investment" in, "encourage the rapid deployment of," and ensure "efficient use of … and expeditious service" in the 1.4 GHz spectrum. It would also "promote investment in and rapid deployment of new technologies"—namely, WMTS. If TerreStar's waiver request is granted, TerreStar would have the opportunity to implement its plan—already thoroughly discussed with the FCC and other WMTS stakeholders—to use its spectrum licenses to facilitate the development of WMTS, a groundbreaking and life-saving technology. WMTS requires additional spectrum to expand into new geographic areas—particularly rural areas, which are specifically mentioned in § 309(j)(4)(B)—and to provide new and innovative services, such as data encryption.[28] By providing this additional spectrum, TerreStar's plan would expand where WMTS can be used and what it can be used to do. TerreStar would be able to do this quickly because it has spent years working through the technical and economic challenges.

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[27] *1.4 GHz Service Rules Order*, 17 FCC Rcd at 10011 ¶ 75 (emphasis added).

[28] Encrypting patient data requires dedicated bandwidth *in addition to* the spectrum used to transmit the data. TerreStar's spectrum could be used to provide this needed additional capacity. Permitting TerreStar to make its spectrum available for WMTS, including for WMTS encryption, would therefore greatly benefit patients: It would allow WMTS devices at federal hospitals to comply with new federal cybersecurity mandates and would allow WMTS providers to secure sensitive patient data effectively. *See* TerreStar Petition for Reconsideration at 4–5.

Denying TerreStar's waiver request, on the other hand, would have precisely the opposite effect. Interference problems prevent many other uses of this spectrum, which means the best (and perhaps only) use of the 1.4 GHz band is WMTS. Indeed, if there were another viable use of this spectrum, it is likely that TerreStar or the Bureau would have identified it. Moreover, if TerreStar's waiver request continues to be denied, in all likelihood the spectrum will not be put to use for many years. The Commission would take considerable time to prepare for and conduct another auction of the spectrum, including revising the applicable service rules to ensure that any future licensee's use of this spectrum does not interfere with WMTS.[29] And because no one else in the market has TerreStar's expertise in using the 1.4 GHz band for WMTS, any other licensee would need considerable time after the auction to put the spectrum to use.

In sum, applying the FCC's substantial-service requirements here would frustrate their purposes. Denying TerreStar's request, rewriting the service rules, and holding another auction would prevent expeditious service in and rapid deployment of the spectrum, and neither the Bureau nor anyone else has suggested that applying the requirements is necessary in order to prevent TerreStar "stockpiling or warehousing" the spectrum. 47 U.S.C. § 309(j)(4)(B). The Bureau should have granted TerreStar's waiver so that it could fulfill the purposes of the substantial-service requirements: promoting the public interest by rapidly developing and using the spectrum.

C. Granting TerreStar's Waiver Request Advances The Public Interest.

Because *denying* TerreStar's waiver request would frustrate the purposes of the substantial-service requirements, TerreStar need only show that *granting* the waiver "would be in the public interest." 47 C.F.R. § 1.925(b)(3)(i). As explained above, the public-interest benefits of granting TerreStar's waiver request are clear and unrebutted. *See supra* Part II.C, The Bureau erred by failing to appropriately weigh the public interest. Were it to do so, it could reach only one rational conclusion: TerreStar's waiver request should be granted.

IV. DENYING TERRESTAR'S WAIVER REQUEST SUBJECTS IT TO UNLAWFUL DISPARATE TREATMENT.

Finally, even apart from the myriad legal and factual errors the Order makes with respect to TerreStar's eligibility for a waiver or extension under FCC rules, the Order is unlawful because it fails to distinguish TerreStar's waiver request from other similar requests the Bureau has recently granted. The Bureau must "'treat[] similarly situated parties alike or provid[e] an adequate justification for disparate treatment.'" *Adams Telcom, Inc. v. FCC*, 38 F.3d 576, 581 (D.C. Cir. 1994) (quoting *McElroy Electronics Corp. v. FCC*, 990 F.2d 1351, 1365 (D.C. Cir. 1993)); *see also Petroleum Commc'ns, Inc. v. FCC*, 22 F.3d 1164, 1172–73 (D.C. Cir. 1994); *Melody Music, Inc. v. FCC*, 345 F.2d 730, 732–33 (D.C. Cir. 1965). In other words, the Bureau's "action cannot stand when it is "so inconsistent with its precedents as to constitute arbitrary treatment amounting to an abuse of discretion." *Garrett v. FCC*, 513 F.2d 1056, 1060 (D.C. Cir. 1975) (citation omitted). Moreover, the Commission must operate under principles of

[29] Notably, in making these revisions the Commission would effectively concede that the prior 1.4 GHz rules did not provide notice of the unique interference problems posed by sensitive WMTS receivers.

fair notice, *see supra* Part II.B, and it cannot "show fair notice when [it] has taken action in the past that conflicts with its current interpretation of a regulation." *United States v. Chrysler Corp.*, 158 F.3d 1350, 1356 (D.C. Cir. 1998).

The Bureau offered no explanation for denying TerreStar a waiver while granting waivers in similar—and sometimes far less compelling—circumstances.[30] For example, the Bureau recently granted AT&T a waiver in circumstances where it also sought to develop a smart grid operation but was unable to comply with its construction deadline because of the "difficulties" it had in trying "to develop, fully coordinate, and deploy a network that [would] not adversely impact entities operating in adjacent spectrum."[31] As here, "technical restrictions needed to protect adjacent … users severely constrain[ed] [AT&T's] productive deployment of [its] spectrum."[32] Unlike TerreStar, however, AT&T was on notice of the restrictions imposed by the sensitivity of users of adjacent spectrum to harmful interference. *Six years* before AT&T submitted its waiver request, the Commission had recognized the interference issue and had accordingly revised the service rules and substantial-performance requirements applicable to this spectrum.[33]

In spite of AT&T's awareness of the "technical restrictions" on its band, the Bureau determined that "the unexpected complexities" AT&T encountered in implementing its plan, "the significant technical limitations placed on" AT&T's band, and "the close coordination required" between AT&T and users of adjacent spectrum created "unique or unusual circumstances" that justified a waiver.[34]

TerreStar's circumstances are not only similar to AT&T's, they weigh even more heavily in favor of granting a waiver. Like AT&T, TerreStar encountered unexpected complexities in implementing a smart grid plan. TerreStar also faced significant technical limitations on the use of its band due to interference concerns created by unusually sensitive users of adjacent spectrum, and its proposed use also required close coordination between it and users of adjacent spectrum. Unlike AT&T, however, TerreStar had *no way of knowing* about the interference problems until late into its license term. Moreover, TerreStar's proposed use presents a particularly powerful public-interest justification for granting the waiver: bringing innovative, life-saving technology to more patients across the country. This includes enabling advanced patient monitoring in rural areas and preventing loss of patient monitoring capabilities at Veterans Health Administration facilities.

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30 *See* TerreStar Petition for Reconsideration at 21–23.

31 *AT&T Mobility Spectrum LLC, BellSouth Mobile Data, Inc., New Cingular Wireless PCS, LLC, and SBC Telecom, Inc., Petition for Limited Waiver of Interim Performance Requirement for 2.3 GHz WCS C and D Block Licenses*, Order, 32 FCC Rcd 708, 713 ¶ 11 (WTB 2017).

32 *Id.* at 709–10 ¶¶ 3–6 (citing *Amendment of Part 27 of the Commission's Rules to Govern the Operation of Wireless Communications Services in the 2.3 GHz Band et al.*, WT Docket Nos. 07-293 et al., Report and Order, 25 FCC Rcd 11710 (2010)).

33 *Id.* at 710 ¶ 6.

34 *Id.* at 713 ¶ 12.

Similarly, when Progeny LMS needed additional time to provide support for critical, life-saving E911 services, the Bureau granted an additional extension, which moved Progeny's new construction deadline for some of its licenses out *18 years* past its original deadline.[35] The Bureau found that the grant of Progeny's waiver was in the public interest because Progeny's proposed use had the "potential of offering significant public safety benefits."[36] In addition, the Bureau credited Progeny's development of equipment, engagement in initial testing and deployment, and ongoing commitment to address a critical public safety issue as justification for the additional extension.[37] Notably, the Bureau did not reject Progeny's request due to Progeny's failure to meet its substantial-service obligations in spite of the decade-plus series of extensions it had already received. Like Progeny, TerreStar's proposed use will produce considerable public-health benefits, and like Progeny, TerreStar has already made considerable progress in readying its spectrum for WMTS, including developing equipment and engaging in initial testing and deployment. Moreover, TerreStar, by abandoning its smart grid ecosystem to solve a dilemma created by the FCC's rules, has also demonstrated its unwavering commitment to public health.

The Bureau was required to adequately justify this disparate treatment of similarly situated parties, and its complete failure to do so renders its Order unlawful.[38] Furthermore, in denying TerreStar's waiver request after granting requests in materially indistinguishable settings, the Bureau effectively adopted a new interpretation of its requirements for waiver, and the Bureau "may not apply [this] new rule retroactively when to do so would unduly intrude upon reasonable reliance interests." *Heckler v. Cmty. Health Servs. Of Crawford Cty., Inc.*, 467 U.S. 51, 60 n.12 (1984); *see also Chrysler Corp.*, 158 F.3d at 1356.

CONCLUSION

For these reasons, and those expressed in the unopposed petitions for reconsideration filed by TerreStar and other stakeholders, the Bureau should reconsider its Order and grant TerreStar's request for a temporary waiver or extension.

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35 *See Request of Progeny LMS, LLC for Waiver and Limited Extension of Time*, Order, 32 FCC Rcd 122, 123 ¶ 3, 135–36 ¶ 27 (WTB 2017).

36 *Id.* at 136 ¶ 28.

37 *Id.* at 137 ¶¶ 29–31.

38 Indeed, the Bureau recently granted a request for relief from the substantial-service requirements, demonstrating that where, as here, compelling and unique circumstances are presented, such relief can and should issue. *See FiberTower Spectrum Holdings, LLC Requests for Waiver, Extension of Time, or in the alternative, Limited Waiver of Substantial Service Requirements*, Order on Remand and Memorandum Opinion and Order, DA 18-78 (rel. Jan. 26, 2018).